

REMARKS

Claims 1-6 are all the claims pending in the application.

I. RESPONSE TO REJECTION UNDER 35 U.S.C. § 103

Referring to Section No. 6 at pages 2 and 3 and Section No. 9 at page 5 of the final Office Action, Claims 1 and 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,165,564 (“Crast”) in view of U.S. Patent Application Publication No. 2002/0016226 (“Jin”), further in view of U.S. Patent No. 6,319,983 (“Lokai”), and further in view of U.S. Patent No. 5,300,325 (“Nealon”).

The examiner emphasizes at the bottom of page 2 of the final Office Action that she is relying on the secondary reference Nealon for the teaching of co-curing a top coat and a primer layer.

Applicants respectfully disagree with the examiner’s conclusion of obviousness and traverse the present rejection. The applied combination of art does not disclose or suggest the presently claimed subject matter, for at least each one of the following independent reasons.

(1) First, the “co-curing” language in Claim 1 actually recites “irradiating the layers ***with UV radiation***, thereby permitting both of the primer composition layer and the UV-curable paint to cure at the same time.” Nealon does not at all mention UV radiation. The curing in Nealon is strictly thermal curing. See, for example, column 4, lines 45-54, of Nealon.

(2) Second, even if the recitation in Claim 1 that the layers are irradiated with UV radiation is to be ignored, the examiner’s analysis of Claim 1 in the Office Action ignores the recitation that “the primer composition layer is ***not irradiated*** with UV radiation ***prior to*** having the UV-curable paint applied thereon.” ***None*** of the applied references teaches or suggests to ***not irradiate*** the primer composition layer with UV radiation ***prior to*** having the UV-curable paint applied thereon. In fact, Nealon teaches away from not irradiating the primer composition layer with UV radiation prior to having the UV-curable paint applied thereon. At column 4, lines 45-54, Nealon teaches to cure the primer for 10 minutes in a curing oven ***before*** applying the top coat.

In addition to the above two bases for traversing the present rejection, arguments presented in the December 2006 Amendment lead to a conclusion of nonobviousness. For example, as stated at the first full paragraph on page 5 of the December 2006 Amendment, Jin does not teach the use of its UV-curable coating as a primer. Instead, at paragraph [0022], Jin identifies its UV-curable coating as a topcoat. Also, as stated at the second full paragraph on page 5 of the December 2006 Amendment, combining Crast and Jin in the manner proposed by the examiner would lead to a solvent-free primer between the UV-curable coating of Crast and the cover surface of a golf ball, whereas the method of Claim 1 comprises coating a layer of a primer composition comprising an aqueous resin having UV-curable functional groups in a molecule and a crosslinker on the cover surface of a golf ball. Additionally, as stated at the paragraph bridging pages 5 and 6 of the December 2006 Amendment, Jin “teaches away” from the proposed combination of Jin and Lokai.

The examiner has not directly addressed the arguments identified in the immediately preceding paragraph. Applicants respectfully request that the examiner address the arguments identified in the immediately preceding paragraph in the next communication to Applicants, if the examiner does not withdraw the present rejection.

There are still other independent reasons leading to a conclusion of nonobviousness for the presently claimed subject matter.

(i) Nealon teaches at column 4, lines 52-54, that the primer and top coat are co-cured and crosslinked at 54 °C for six hours. However, at column 4, lines 45-48, Nealon teaches that the balls are coated with the primer, dried, then cured for 10 minutes at 66 °C in a curing oven.

(ii) Nowhere in Nealon is it disclosed or taught that the primer composition layer is not irradiated with UV radiation before the UV-curable paint is applied onto the layer. Also, Nealon’s process presents that the primer and top coat are co-cured by heat, which does not suggest using UV radiation.

(iii) With respect to effects, the teachings of Nealon are insufficient. That is, the effects (or objects) of Nealon are to provide a golf ball having superior adhesion of its polyurethane top coat to a thermoplastic ionomer resin-based composition. But, Nealon is silent

in teaching that the superior adhesion property carries the improvement of abrasion-resistance of golf balls. The effects and advantages of the presently claimed subject matter is completely unexpected from Nealon.

In fact, in the process of Nealon, the primer composition layer has been almost cured progressively before the top coat is applied. So, the adhesion property of Nealon would be weak, in comparison to that achieved by the presently claimed subject matter. In the present method, the primer composition is not cured before the UV-curable paint is applied onto the layer. In the presently claimed subject matter, both of the primer composition and the UV-curable paint are cured by UV radiation at the same time, thereby to obtain an enhanced bond strength between the primer composition layer and the UV-curable paint layer. The bond strength of the presently claimed subject matter would be stronger than that of Nealon.

(iv) Crast merely teaches a method for a preparing a golf ball having a polyurethane top coating formed from UV-curable coating. However, Crast fails to teach that a primer composition comprises an aqueous resin having UV-curable functional group in a molecule and a crosslinker. And, Crast fails to disclose or teach that both of the primer composition and the UV-curable paint are cured by UV radiation at the same time.

None of Jin and Lokai cures the deficiencies noted herein.

For all of the foregoing reasons, Applicants respectfully request the reconsideration and withdrawal of the present §103 rejection.

II. RESPONSE TO REJECTION UNDER 35 U.S.C. § 103

Referring to Section No. 7 at pages 3 and 4 of the Office Action, Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Crast in view of Jin, further in view of Lokai, and further in view of Nealon, and further in view of U.S. Patent No. 5,089,376 (“Setthachayanon”).

Applicants respectfully traverse.

Claim 4 depends from Claim 1. As stated at Section I above, the combination of Crast in view of Jin, further in view of Lokai, and further in view of Nealon does not teach or suggest the

subject matter of Claim 1. Setthachayanon does not cure the deficiencies in the applied art identified at Section I above. In fact, Setthachayanon is merely relied upon solely for its alleged teaching concerning introducing a carboxyl moiety into a urethane (meth)acrylate polymer. Accordingly, Claim 4 is also patentable, at least by virtue of its dependence from Claim 1.

Withdrawal of the present §103 rejection is requested.

III. CONCLUSION

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the examiner feels may be best resolved through a personal or telephone interview, the examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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